

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
29 November 2001 (29.11.2001)

PCT

(10) International Publication Number
WO 01/90337 A2

(51) International Patent Classification⁷: C12N 9/22,
9/12, C12Q 1/68

(21) International Application Number: PCT/US01/17086

(22) International Filing Date: 24 May 2001 (24.05.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/577,304 24 May 2000 (24.05.2000) US
09/758,282 11 January 2001 (11.01.2001) US
09/864,426 24 May 2001 (24.05.2001) US
09/864,636 24 May 2001 (24.05.2001) US

(71) Applicant (for all designated States except US): **THIRD WAVE TECHNOLOGIES, INC.** [US/US]; 502 South Rosa Road, Madison, WI 53719 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **ALLAWI, Hatim** [JO/US]; 33 Oakbridge Court #21, Madison, WI 53717 (US). **BARTHOLOMAY, Christian, Tor** [US/US]; 1913 Reetz Road, Madison, WI 53711 (US). **CHEHAK, Lu-Anne** [US/US]; 3211 Vold Court, Apartment 8, Janesville, WI 53546 (US). **CURTIS, Michelle, L.** [US/US]; 2740 Nadene Road, Cottage Grove, WI 53527 (US). **EIS, Peggy, S.** [US/US]; 5781 Pembroke Drive, Madison, WI 53711 (US). **HALL, Jeff, G.** [US/US]; 6305 Dylan Drive, Madison, WI 53719 (US). **IP, Hon, S.** [CA/US]; 6310 Pilgrim Road, Madison, WI 53711 (US). **KAISER, Michael** [US/US]; 2901 Shefford Drive, Madison, WI 53719 (US). **KWIATKOWSKI, Robert, W., Jr.** [US/US]; 506 Azurene Lane, Verona, WI 53593 (US). **LUKOWIAK, Andrew, A.** [US/US]; 2254 High Ridge Trail, Madison, WI 53713 (US). **LYAMICHEV, Victor** [RU/US]; 2523 Carriedale Court, Madison, WI 53711 (US). **MA, WuPo** [CN/US]; 1110 N. Westfield Road,

Madison, WI 53717 (US). **OLSON-MUNOZ, Marilyn, C.** [US/US]; 5878 Tree Line Drive, Madison, WI 53711 (US). **OLSON, Sarah, M.** [US/US]; 2968 Thinnest Street, Cross Plains, WI 53528 (US). **SCHAEFER, James, J.** [US/US]; 4369 Crawford Drive, Madison, WI 53711 (US). **SKRZYPCZYNSKI, Zbigniew** [PL/US]; 881 Orchid Street, Verona, WI 53953 (US). **TAKOVA, Tsetska, Y.** [US/US]; 9 Oak Glen Court, Madison, WI 53717 (US). **VEDVIK, Kevin, L.** [US/US]; 1302 Monica Lane, Madison, WI 53704 (US). **LYAMICHEV, Natalie, E.** [RU/US]; 2523 Carriedale Court, Madison, WI 53711 (US). **NERI, Bruce, P.** [US/US]; 5714 Kilkenney Place, Madison, WI 53711 (US).

(74) Agents: **CASIMIR, David, A. et al.**; Medlen & Carroll, LLP, 220 Montgomery Street, Suite 2200, San Francisco, CA 94104 (US).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: DETECTION OF RNA

(57) Abstract: The present invention provides novel cleavage agents and polymerases for the cleavage and modification of nucleic acid. The cleavage agents and polymerases find use, for example, for the detection and characterization of nucleic acid sequences and variations in nucleic acid sequences. In some embodiments, the 5' nuclease activity of a variety of enzymes is used to cleave a target-dependent cleavage structure, thereby indicating the presence of specific nucleic acid sequences or specific variations thereof.

WO 01/90337 A2